

Locating Pin for Jig & Fixtures

Standard with Shoulder & Pilot Shape Selectable

Features: For Standard Grade, P dimension tolerance is ± 0.05 (for Precision Grade, ± 0.01 or ± 0.02), concentricity is 0.03 or 0.05 (for Precision Grade, 0.01 or 0.02). Tip shape is selectable. Polishing Relief Groove is smaller than the conventional products to avoid a workpiece getting stuck.

Threaded

RoHS10

Type	Material	Hardness
SELANA	Round 4137 Alloy Steel	Hardened 35-40 HRC min.
SELAND	Diamond	4137 Alloy Steel
TSELANA	Round SCM415 Alloy Steel (JIS)	Carburized 55 HRC min. (Depth 0.7-0.8) Anti-Carburizing on Threads
TSELAND	Diamond	SCM415 Alloy Steel (JIS)

Type	Material	Hardness	Surface Treatment
D-SLANA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	Dicoat® Treated
D-SLAND	Diamond	4137 Alloy Steel	Hard Chrome Plating
R-SLANA	Round 4137 Alloy Steel	35-40 HRC min. (Surface 750 HV min.)	
R-SLAND	Diamond	4137 Alloy Steel	

Reference: $\sin 15^\circ = 0.259$ $\sin 30^\circ = 0.5$ $\sin 45^\circ = 0.707$
 $\tan 15^\circ = 0.267$ $\tan 30^\circ = 0.577$ $\tan 45^\circ = 1$

Pilot-Tip Shape Selection

A Shape
 ① The center hole remains.
 P-2tan(A/2) ≥ 0.73
 P-2tan(A/2) ≥ 2 (Dicoat®)

B Shape
 ① The center hole remains.
 $e = P/2 \tan(A/2) + R / \sin(A/2)$

Surface Finish Relief
 Relief dimensions are reference values.

Part Number		P	B	L	A	E	L ₁	H	R	W
Type	Tip Shape	0.1 mm Increment	1 mm Increment	Selection	Selection	(Shape A) 1 mm Increment				
Hardened (Round) SELANA	A (Taper)	6	0	3.0-7.0	*30	1-10	6	9	1	1
		8	-0.012	3.0-9.0			10	11	1.5	(2)
		10	0	4.5-12.0			12	13	2	1-3
		10T	-0.015	9.0-13.0			15	15	3	4
(Diamond) SELAND	B (Taper R)	12	0	9.0-13.0	120		15	15	3	4
		16	-0.018	13.0-16.0			18	19	4	5

① W Dimension D6, D8: W=2 when P>5.0. D10, 10T: W=1 when P<5.0; W=2 when 5.0≤P≤7.0; W=3 when P>7.0. ② L dimension in () is not applicable to diamond shape and Dicoat® treatment.
 ③ Angle A *30 is not applicable to Tip Shape B. Select from Standard Grade, Shouldered P1542 ④ B Dimension 5 mm - will be selected for Dicoat® Treated / TiCN Treated items.

Set Screw Flat Type

RoHS10

Type	Material	Hardness
SELATA	Round 4137 Alloy Steel	Hardened 35-40 HRC min.
SELATD	Diamond	4137 Alloy Steel
TSELATA	Round SCM415 Alloy Steel	Carburized 55 HRC min. (Depth 0.7-0.8) Anti-Carburizing on Thread
TSELATD	Diamond	SCM415 Alloy Steel

Type	Material	Hardness	Surface Treatment
R-SLATA	Round 4137 Alloy Steel	35-40 HRC (Surface 750 HV min.)	Hard Chrome Plating
R-SLATD	Diamond	4137 Alloy Steel	
D-SLATA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	Dicoat® Treated
D-SLATD	Diamond	4137 Alloy Steel	
H-SLATA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	TiCN Treatment
H-SLATD	Diamond	4137 Alloy Steel	

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Pilot-Tip Shape Selection

A Shape
 ① The center hole remains.
 P-2tan(A/2) ≥ 0.73
 P-2tan(A/2) ≥ 2 (Dicoat®)

B Shape
 ① The center hole remains.
 $e = P/2 \tan(A/2) + R / \sin(A/2)$

Surface Finish Relief
 Relief dimensions are reference values.

Part Number		P	B	L	A	E	L ₁	H	d	R	Applicable Set Screw	W
Type	Tip Shape	0.1 mm Increment	1 mm Increment	Selection	Selection	(Shape A) 1 mm Inc.						
Hardened (Round) SELATA	A (Tapered)	6	0	3.0-7.0	*30	1-10	8	9	4	1	M5	1
		8	-0.012	3.0-9.0			11	5	1.5	M5	(2)	
		10	0	4.5-12.0			10	5	2	M6	1-3	
		10T	-0.015	9.0-13.0			12	10	3	M8	4	
(Diamond) SELATD	B (Taper R)	12	0	9.0-13.0	120		12	10	15	9	3	4
		16	-0.018	13.0-16.0			19	13	4	M8	5	

① W Dimension D6, D8: W=2 when P>5.0. D10, 10T: W=1 when P<5.0; W=2 when 5.0≤P≤7.0; W=3 when P>7.0. ② Angle A *30 is not applicable to Tip Shape B. Select from Standard Grade, Shouldered P1542
 ③ B Dimension 5 mm - will be selected for Dicoat® Treated / TiCN Treated items.

Part Number Example

Type	Tip Shape	D	P	B	L	A	E
SELANA	A	16	P14.2	B21	L15	A60	E2
SELATA	B	8	P6.0	B15		A90	

Part Number Alterations

Type	Tip Shape	D	P	B	L	A	E	(KC / KD / SC / MC)
SELATA	A	6	P6.8	B14		A30	E2	SC

Alterations	Flat Position	Flat	Wrench Flats	Thread Diameter
Code	KC	KD	SC	MC
Spec.	Ordering Code: KC Changes the flat position to 90° from the standard position 0°. ① Applicable to Diamond shape only.	Ordering Code: KD Machining on one side. ① H-P≥2 ② Applicable to Round Shape Only.	Ordering Code: SC Adds wrench flats. ① H 9 11 13 15 19 ② H 7 8 11 13 17	Ordering Code: MC8 Changes the thread diameter. ① D/3≤M<D ② Mmin3 ③ Applicable to Threaded Type only.

Locating Pin for Jigs & Fixtures

Standard (h7)

Features: For Standard Grade, P dimension tolerance is ± 0.05 (for Precision Grade, ± 0.01 or ± 0.02), concentricity is 0.03 or 0.05 (for Precision Grade, 0.01 or 0.02).

Threaded

RoHS10

Type	Material	Hardness
ELNNA	Round 4137 Alloy Steel	Hardened 35-40 HRC min.
ELNND	Diamond	4137 Alloy Steel or Equivalent
TELNNA	Round SCM415 Alloy Steel (JIS)	Carburized 55 HRC min. (Depth 0.7-0.8) Anti-Carburizing on Threads
TELNND	Diamond	SCM415 Alloy Steel (JIS)

Type	Material	Hardness	Surface Treatment
R-LNNA	Round 4137 Alloy Steel	35-40 HRC min. (Surface 750 HV min.)	Chrome Plating
R-LNND	Diamond	4137 Alloy Steel	
D-LNNA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	Dicoat® Treated
D-LNND	Diamond	4137 Alloy Steel	
H-LNNA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	TiCN Treatment
H-LNND	Diamond	4137 Alloy Steel	

Reference: $\sin 15^\circ = 0.259$ $\sin 30^\circ = 0.5$ $\sin 45^\circ = 0.707$
 $\tan 15^\circ = 0.267$ $\tan 30^\circ = 0.577$ $\tan 45^\circ = 1$

Pilot-Tip Shape Selection

A Shape
 ① The center hole remains.
 $e = P/2 \tan 15^\circ + R / \sin 15^\circ$
 P-2tan(A/2) ≥ 0.73
 P-2tan(A/2) ≥ 2 (Dicoat®)

B Shape
 ① The center hole remains.
 $e = P/2 \tan(A/2) + R / \sin(A/2)$

Surface Finish Relief
 Relief dimensions are reference values.

Part Number		P	B	L	L ₁	R	W		
Type	Tip Shape	0.1 mm Increment	1 mm Increment	Selection					
Hardened (Round) ELNNA	A (Taper)	6	0	8.0-12.0	②-30	6	3		
		8	-0.012	10.0-16.0				10	3.5
		10	0	12.0-20.0				12	4
		10T	-0.015	14.0-25.0				15	5
(Diamond) ELNND	B (Taper R)	12	0	14.0-25.0	120	15	6		
		16	-0.018	18.0-32.0				18	8
		20	0	22.0-35.0				22	9

② L dimension in () is not applicable to Diamond Shape, Dicoat® and TiCN treatment. ③ B Dimension is selectable from 5 mm - for Dicoat® Treated / TiCN Treated Products/Diamond Shape.
 ④ D16, D20 not available for R-LNNA, R-LNND, D-LNNA, D-LNND, H-LNNA, H-LNND part types. ⑤ D6, D8 not available for H-LNNA, H-LNND part types.

Set Screw Flat Type

RoHS10

Type	Material	Hardness
ELNTA	Round 4137 Alloy Steel	Hardened 35-40 HRC min.
ELNTD	Diamond	4137 Alloy Steel or Equivalent
TELNTA	Round SCM415 Alloy Steel	Carburized 55 HRC min. (Depth 0.7-0.8) Anti-Carburizing on Threads
TELNTD	Diamond	SCM415 Alloy Steel

Type	Material	Hardness	Surface Treatment
R-LNTA	Round 4137 Alloy Steel	35-40 HRC min. (Surface 750 HV min.)	Hard Chrome Plating
R-LNTD	Diamond	4137 Alloy Steel	
D-LNTA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	Dicoat® Treated
D-LNTD	Diamond	4137 Alloy Steel	
H-LNTA	Round D2 Tool Steel	55 HRC min. (Surface 3000 HV min.)	TiCN Treatment
H-LNTD	Diamond	4137 Alloy Steel	

Reference: $\sin 15^\circ = 0.259$ $\sin 30^\circ = 0.5$ $\sin 45^\circ = 0.707$
 $\tan 15^\circ = 0.267$ $\tan 30^\circ = 0.577$ $\tan 45^\circ = 1$

Pilot-Tip Shape Selection

A Shape
 ① The center hole remains.
 $e = P/2 \tan 15^\circ + R / \sin 15^\circ$
 P-2tan(A/2) ≥ 0.73
 P-2tan(A/2) ≥ 2 (Dicoat®)

B Shape
 ① The center hole remains.
 $e = P/2 \tan(A/2) + R / \sin(A/2)$

Surface Finish Relief
 Relief dimensions are reference values.

Part Number		P	B	L	L ₁	d	R	Applicable Set Screw	W			
Type	Tip Shape	0.1 mm Increment	1 mm Increment	Selection								
Hardened (Round) ELNTA	A (Tapered)	6	0	8.0-12.0	②-30	8	4	3	M5	3		
		8	-0.012	10.0-16.0							5	3.5
		10	0	12.0-20.0							7	4
		10T	-0.015	14.0-25.0							5	5
(Diamond) ELNTD	B (Taper R)	12	0	14.0-25.0	120	10	9	6	M6	5		
		16	-0.018	18.0-32.0							13	8
		20	0	22.0-35.0							17	8

② D16, D20 not available for R-LNTA, R-LNTD, D-LNTA, D-LNTD, H-LNTA, H-LNTD part types.
 ③ D6, D8 not available for H-LNTA, H-LNTD part types.

Part Number Example

Type	D	P	B	L
ELNNA	10	P12.0	B10	L8
ELNTA	6	P10.0	B15	

Part Number Alterations

Type	D	P	B	L	(KC, KD, etc.)
ELANA	6	P8.0	B14	L5	KD

Alterations	Grooves for Wear Sign	Flat Position	Flat Machining	Thread Diameter	Thread Length	Tip Angle Change
Code	MK	KC	KD	MC	FC	RC
Spec.	Machine 4 grooves on B Dimension. The wear and tear of the grooves indicate the degree of wears. ① Applicable to Hardened, Carburized and Round Shape Products only. ② Applicable when B ≥ 4 Groove Depth: 0.2mm (±0.05 mm) Groove Shape: V Groove (90°)	Ordering Code: KC Changes the flat position to 90° from the standard position 0°. ① Applicable to Diamond Shape Type only.	Ordering Code: KD Machining on one side. ① Applicable to Round Shape Type only.	Ordering Code: MC8 Changes the thread diameter. ① D/3≤M<D ② Mmin3 ③ Applicable to Threaded only.	Ordering Code: FC15 Changes the thread length. FC=1 mm Increment D6-10: M≤FC≤Mx3 D12, 16: M≤FC≤Mx2.5 D20: M≤FC≤Mx2 ① Applicable to Threaded only ② Not applicable to Dicoat® treatment and TiCN treatment.	Ordering Code: RC60 Changes the tip angle. Selection: 60°, 90°, 120°